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February 6, 2002

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VIA HAND DELIVERY

William F. Caton, Esquire
Acting Secretary
Federal Communications Commission
445 12th Street, S.W., Room TWB204
Washington, DC 20554

**Re: Reply Comments of Cornell University
WT Docket 01-319**

Dear Mr. Caton:

Transmitted herewith, on behalf of Cornell University, are an original and four copies of its Reply Comments filed in the above-referenced proceeding.

If questions arise, please contact me.

Sincerely,



Paul J. Feldman
Counsel for Cornell University

Enclosure

cc: Certificate of Service
Patricia McClary, Esq.

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Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, D.C. 20554

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FEB - 6 2002

FEDERAL COMMUNICATIONS COMMISSION
OFFICE OF THE SECRETARY

In the Matter of

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Review of Quiet Zones

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WT Docket 01-319

Application Procedures

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REPLY COMMENTS OF CORNELL UNIVERSITY

Cornell University hereby submits its Reply Comments in response to the Commission's November 21, 2001 Notice of Proposed Rulemaking in the above-captioned docket ("NPRM"). Herein, Cornell opposes the proposals in certain comments which would so radically revise the Quiet Zone rules that coordination would in effect be eliminated, and the protection of Quiet Zone entities significantly compromised. Such proposals are clearly contrary to the public interest, and they are way beyond the scope of the NPRM, which is designed to streamline the Commission's processing of applications, not eliminate coordination requirements for applicants. However, as noted in its initial Comments in this proceeding, Cornell supports certain proposals in the NPRM designed to encourage early coordination, while protecting the current procedural rights of the Quiet Zone entities where early coordination is not performed.

As noted previously, Cornell has a substantial interest in this proceeding, as it operates the Arecibo Observatory ("Arecibo" or "Observatory") in Arecibo, Puerto Rico. Arecibo is part of the National Astronomy and Ionosphere Center ("NAIC"), a national

research center operated under a cooperative agreement with the National Science Foundation ("NSF").

Arecibo has learned from its extensive experience that the earlier that a wireless operator and an effected Quiet Zone Entity ("QZE") begin the coordination process, the better the result will be for all parties. Accordingly, while Cornell does not believe that the current Quiet Zone procedures create a significant burden on wireless applicants, in its initial Comments Cornell supported the following regime, which is intended to encourage early coordination, while protecting the current procedural rights of the QZE where early coordination is not performed:

- If the wireless operator performs early coordination with the QZE, and the operator files its application with the written consent of the QZE attached, then the Commission should be free to expedite the processing of the application, without regard to the mandated 20 day waiting period for comments or objections from the QZE.¹

- Similarly, applicants for Part 101 facilities who have performed early coordination and attached the written consent of the QZE to their application should be allowed to operate facilities in a Quiet Zone on a conditional basis, pending the Commission's processing of the application.

- In all other cases, the current Quiet Zone procedures and rules should apply, *i.e.*, the Commission should forbear from processing the application for the

¹ The written consent of the QZE should contain reference to the parameters of the wireless operation consented to, so that the Commission can compare those parameters with the parameters sought in the application. If the parameters are different in any way, then the grant of consent is void, and the Commission should not only follow the mandated 20 day waiting period, but it should either return the application without processing, or should alert the QZE, so that the QZE knows that it should review the application and provide comments or objection where appropriate to the Commission. Furthermore, even where the wireless operator attaches written consent, it should still be required to serve a copy of the application on the affected QZE. In its Comments, NRAO addresses the same concern about changes in application parameters subsequent to coordination with a QZE. NRAO suggests that while it will coordinate with an applicant prior to the filing of an application, it will not grant consent until the application is actually filed with the Commission. Cornell does not oppose this approach.

mandated 20 day period, and Part 101 applicants should not commence conditional operations in Quiet Zones.

The above proposal is largely tracks the proposal in the NPRM.

Cornell was pleased to see that the majority of the comments filed in this proceeding also supported the proposal in the NPRM. See Comments of National Academy of Sciences ("CORF"), Comments of the National Radio Astronomy Observatory ("NRAO"), and Comments of the NSF. However, some comments suggested rule revisions that go far beyond those proposed in the NPRM. The NPRM recognized the importance of the Quiet Zone regulations in protecting QZEs from harmful interference, and it stated that:

We are not proposing to reduce or eliminate carrier requirements to coordinate with Quiet Zones. Rather, we are looking to streamline our application processes so long as the underlying objectives of the Quiet Zone rules are not compromised.

NPRM at para. 5 (emphasis added). In essence, the NPRM proposed that in return for additional and early coordination by carriers with QZEs, the Commission would streamline its own processing of the applications. Yet, some proposals in the comments would so radically revise the Quiet Zone rules that coordination would in effect be eliminated, and the protection of QZEs significantly compromised. Such proposals are way beyond the scope of the NPRM, and clearly contrary to the public interest.

For example, while Spanish Broadcasting System, Inc. ("SBS") discusses the proposals in the NPRM, it asserts (with no specific evidence) that the current

procedures are too “time consuming and burdensome”, and that consequently, the Commission should adopt a new system of Quiet Zone compliance based on self-certification by wireless carriers. SBS Comments at pages 3-4. The gravamen of such an approach is that there would be no actual communication between the wireless applicant and the QZE, and thus no actual coordination. Such an approach is fraught with peril for QZEs. Even assuming that all applicants would attempt to comply in good faith with SBS’ proposed “clear field strength limits”, there is the significant likelihood that some applicants will not make the proper calculations.² It is precisely for this reason that the coordination requirements provide for actual communication between applicants and QZEs, thus allowing QZE staff to assist wireless applicants and review the calculations made by the applicants. Furthermore, while SBS asserts (without any specific examples) that self-certification has a “proven track record” at the FCC, as a broadcaster, SBS knows that no broadcast applicant may currently file an application for new or modified broadcast facilities without making a documented showing that its proposed facilities will not cause prohibited interference to other parties. There is no “self-certification” in such cases. Similarly, applicants for new or modified non-

² The likelihood that self-certifying applicants will cause harmful interference to QZEs would be increased even more if the Commission were to accept SBS’ proposal to allow a showing of terrain shadowing to overcome otherwise predicted interference to QZEs. Comments at para. 7. SBS provides no specific description as to how such shadowing would be calculated. However, while current terrain shadowing programs such as those based on OET Bulletin 69 may have some limited use in calculating reduction of interference to broadcast facilities, such programs are not designed to predict the impact on the vastly more sensitive receivers of radio astronomy observatories. Indeed, there are numerous circumstances where the Commission will not allow terrain shadowing showings even in the context of broadcast applications.

broadcast wireless facilities currently may not rely on self-certification for compliance with non-interference requirements.

While SBS' self-certification proposals would radically eliminate required protections to QZEs, even its suggestions regarding streamlining the current Quiet Zone procedures raise significant concerns. For example, SBS suggests that if a QZE does not "answer" a wireless carrier's advanced notification of a proposal within 30 days, then concurrence by that QZE should be assumed. SBS Comments at para. 4. The Commission should not adopt this proposal. First, there is no evidence in the record that QZEs currently take an unnecessarily long time in reviewing proposals. In initial Comments in this proceeding, Cornell noted that the Arecibo Observatory receives wireless applications on the average of every two days, yet typically completes review of the applications within one week. Its review of informal pre-application proposals is similarly timely. Furthermore, SBS' automatic implied consent proposal is filled with problems. How should timing be measured if the applicant sends incomplete information to the QZE, if the QZE responds that it needs clarification on certain items before it can make a final evaluation, or if the application is in fact never received³ by the QZE?⁴

³ Arecibo has on occasion received applications which should have been sent to the NRAO.

⁴ Cingular Wireless LLC makes a similar proposal, and analogizes to the 30 days wireless carriers have to respond to prior coordination notices. Comments at page 6. However, this analogy is not appropos, as the ultra-sensitive nature of radio astronomy receivers, and their use to receive signals over a wide range of frequencies, make radio astronomy observatories much more vulnerable to interference than wireless operators. As a result, the dangers of inadvertent "automatic consent" are much greater for observatories than for wireless carriers.

SBS' suggestion that coordination need not be required for modifications that are "technically equivalent" to current facilities, is as problematic as its self-certification proposal. Leaving it to applicants to evaluate what constitutes "equivalency" is unacceptably vulnerable to abuse. Thus, the Commission would have to create a list of parameters, the modification of which would negate a claim of equivalency. At a minimum, such a list would have to include any change in: the geographic coordinates of the antenna; antenna height, direction or gain; transmitted frequency; emission designator; or radiated power. Moreover, while some parties may believe that "equivalency" can be maintained by changes in one parameter to negate the change in a different parameter, this should not be applicable in the case of Quiet Zone rules. For example, while operators may contemplate lowering radiated power to compensate for raising an antenna, the raising of antenna could bring the antenna into line-of-sight with the Observatory, which can have a particularly destructive impact, even if the radiated power is reduced.

In spite of the possibility of creating a list of parameters that exclude a change from technical equivalency, Cornell still believes that the best approach would be to not exempt "technically equivalent" modifications from the Quiet Zone procedures. There is no basis in the record demonstrating the need for such an approach. Furthermore, this proposal raises significant risks of harmful interference to QZEs, and is beyond the scope of this proceeding, which is designed to streamline the Commission's processing of applications, not eliminate coordination requirements for applicants.

RCC Consultants, Inc. ("RCC") states that its comments are directed only at

NRAO and the Naval Radio Research Laboratory. Nevertheless, Cornell believes that RCC's suggestions are troublesome, as described below.

RCC suggests that the interference protection criteria should be enacted by the Commission. However, the Commission has already considered and rejected such an approach numerous times. See, e.g., Puerto Rico Radio Astronomy Coordination Zone, Memorandum Opinion and Order, FCC 98-140, released July 2, 1998, at paras. 5-6.

The reasons provided therein are still applicable today: the development of such standards is difficult and time consuming, and the Observatory is in the best position to develop them. While RCC tries to suggest that the criteria developed may not be reasonable, and/or are "arbitrarily" changed, RCC has provided absolutely no specifics to substantiate its claim, nor is there any other substantiating evidence in the record.⁵

Lastly, while RCC requests that the Commission create "a clear process for appeals of interference objections raised by NRAO and NRRL", that process already exists: if the QZE objects to a proposed facility, the applicant can still file an application, and the Commission has the final authority to grant the application over the objection of the QZE. See, e.g., Puerto Rico Radio Astronomy Coordination Zone, Memorandum Opinion and Order at para. 33.

In sum, Cornell notes that there is no evidence in the record that the current Quiet Zone procedures are inefficient or unduly burdensome on applicants. The basis for issuing the NPRM was a general four sentence statement by one party in response

⁵ It should be noted that the interference protection criteria used by NRAO and by the Arecibo Observatory are posted on their respective Web sites: <http://www.gb.nrao.edu/nrqz.html> and www.naic.edu/techinfo/prcz/prczinfo.htm.

to the 2000 Biennial Review. The only other allegations of undue burden in the record, made by two parties (RCC or SBS), are also vague and unsubstantiated. Accordingly, Cornell opposes the proposals in the comments which would so radically revise the Quiet Zone rules that coordination would in effect be eliminated, and the protection of QZEs significantly compromised. Such proposals are clearly contrary to the public interest, and they are way beyond the scope of the NPRM, which is designed to streamline the Commission's processing of applications, not eliminate coordination requirements for applicants. Nevertheless, the Observatory always seeks to be a good "spectrum neighbor", and it recognizes that early coordination between a wireless applicant and a QZE promotes the best results for both parties and the Commission. Accordingly, Cornell supports certain proposals in the NPRM which are intended to encourage early coordination, while protecting the current procedural rights of the QZE where early coordination is not performed.

Respectfully submitted,

CORNELL UNIVERSITY

A handwritten signature in black ink, appearing to read "Paul J. Feldman", with a horizontal line underneath it.

Paul J. Feldman
Its Attorney

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February 6, 2002

CERTIFICATE OF SERVICE

I, Joan P. George, a secretary in the law firm of Fletcher, Heald & Hildreth, do hereby certify that a true copy of the *Reply Comments of Cornell University* was sent this 6th day of February, 2002, by hand where indicated and by first-class mail postage prepaid to the following:

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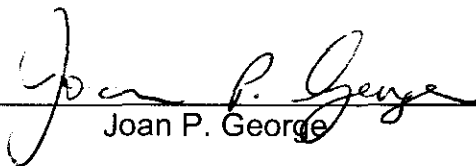
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* By hand

RCC Consultants, Inc. provided no name or address in its Comments and no copy of the Reply Comments of Cornell University could therefore be served on it.